Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

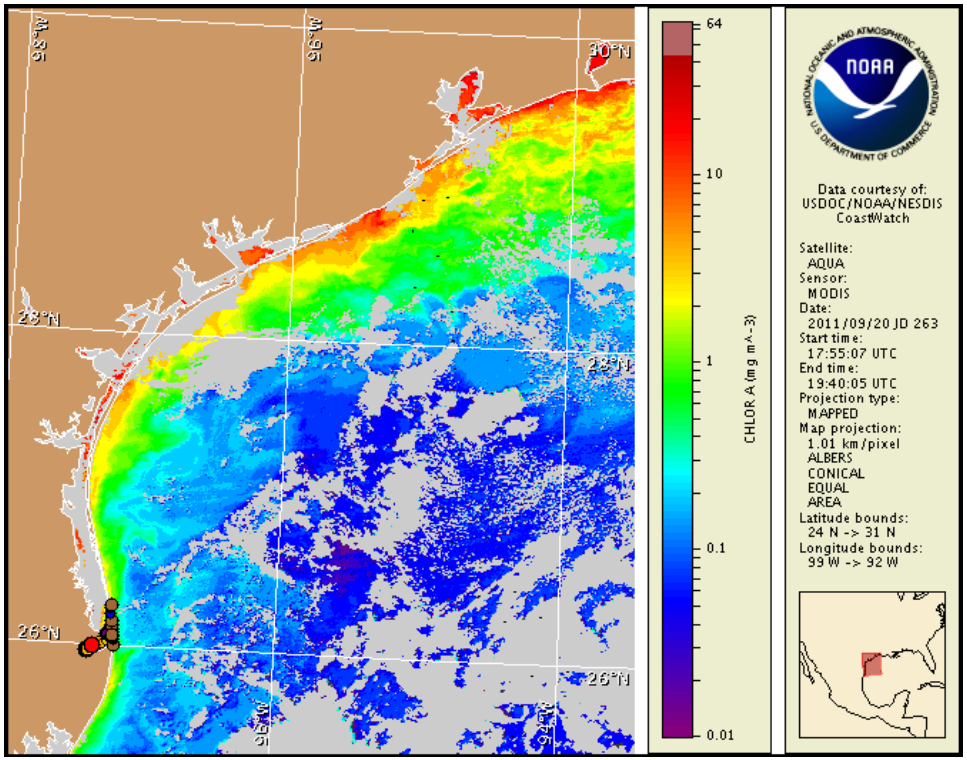
Thursday, 22 September 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 19, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from September 12 to 22 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

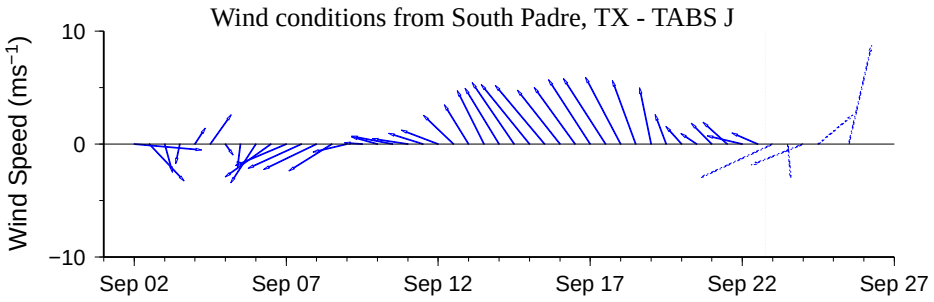
A harmful algal bloom remains along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Patchy high impacts are possible within the Brownsville Ship Channel area today through Sunday. Patchy moderate impacts are possible within the lower Laguna Madre region and along the coastal South Padre Island and Brazos Island State Park regions today through Sunday. No impacts are expected elsewhere alongshore Texas today through Sunday, September 25. Reports of light respiratory irritation and dead fish have been received from the southern bayside of South Padre Island and lower Laguna Madre/South Bay region. Dead fish have also been reported from the Boca Chica region.

Analysis

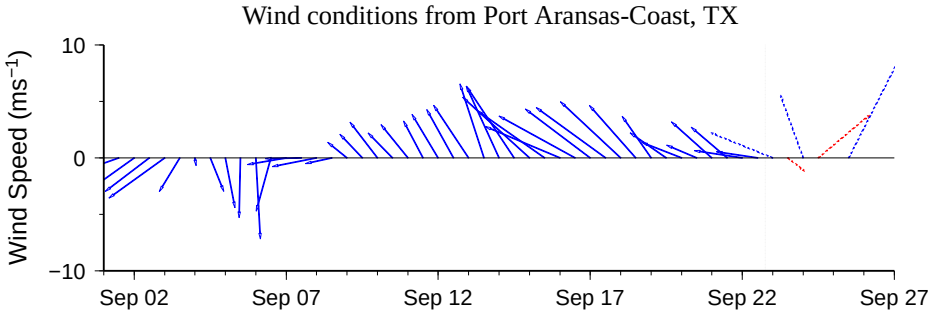
A harmful algal bloom continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Three coastal samples collected from the University of Texas Pan American Coastal Studies Lab, along the southern end of South Padre Island, indicate that *Karenia brevis* concentrations remain between 'low a' and 'low b' alongshore (9/17-22; TPWD). Concentrations of *K. brevis* were higher than previously reported in three 'low a' samples collected from Brazos-Santiago Pass (9/17-21; TPWD) and four samples ranging between 'very low a' to 'low b' collected from the Isla Blanca Boat Ramp (9/17-9/22; TPWD). One sample collected from Boca Chica Beach, 3.6 miles north of the location where 'low a' and 'low b' *K. brevis* concentrations were previously reported (9/16-18; TPWD), indicates 'very low a' concentrations of *K. brevis* (9/19; TPWD). Two samples collected from the San Martin Boat Ramp indicate that *K. brevis* concentrations remain 'high' within the Brownsville Ship Channel (9/17-18; TPWD). No newly dead fish were observed in the Boca Chica region as of Monday, September 19 (TPWD). Light respiratory irritation was reported in the lower Laguna Madre and South Bay region, and dead fish were observed near the Coast Guard station (9/20; TPWD). Onshore winds through Sunday will increase the potential for respiratory impacts along the coast in the South Padre Island and Boca Chica regions and within the Brownsville Ship Channel area and lower Laguna Madre.

Recent MODIS imagery (9/20, shown left) is partially obscured by clouds from Pass Cavallo to the Aransas Pass area. Patches of elevated chlorophyll (2-4 μg/L) remain visible in the coastal region, where the harmful algal bloom has been identified, and along the coast north to the Aransas Pass area. Elevated to high chlorophyll (3-17 μg/L) is also visible stretching along- and offshore of the Texas coast from Aransas Pass to Sabine Pass with patches of very high chlorophyll (>20 μg/L) between Bolivar Roads Pass and Sabine Pass; however, elevated chlorophyll in the region north of Aransas Pass is likely due to the resuspension of benthic chlorophyll and sediments and not related to a harmful algal bloom.

Forecast models indicate a maximum bloom transport between <10 to 35 km south along the coast from coastal sample locations in the Brazos Santiago Pass area from September 17 to 25, and a maximum transport of 15 km south along the coast from Port Aransas from September 20 to 25. ˜Kavanaugh, Derner



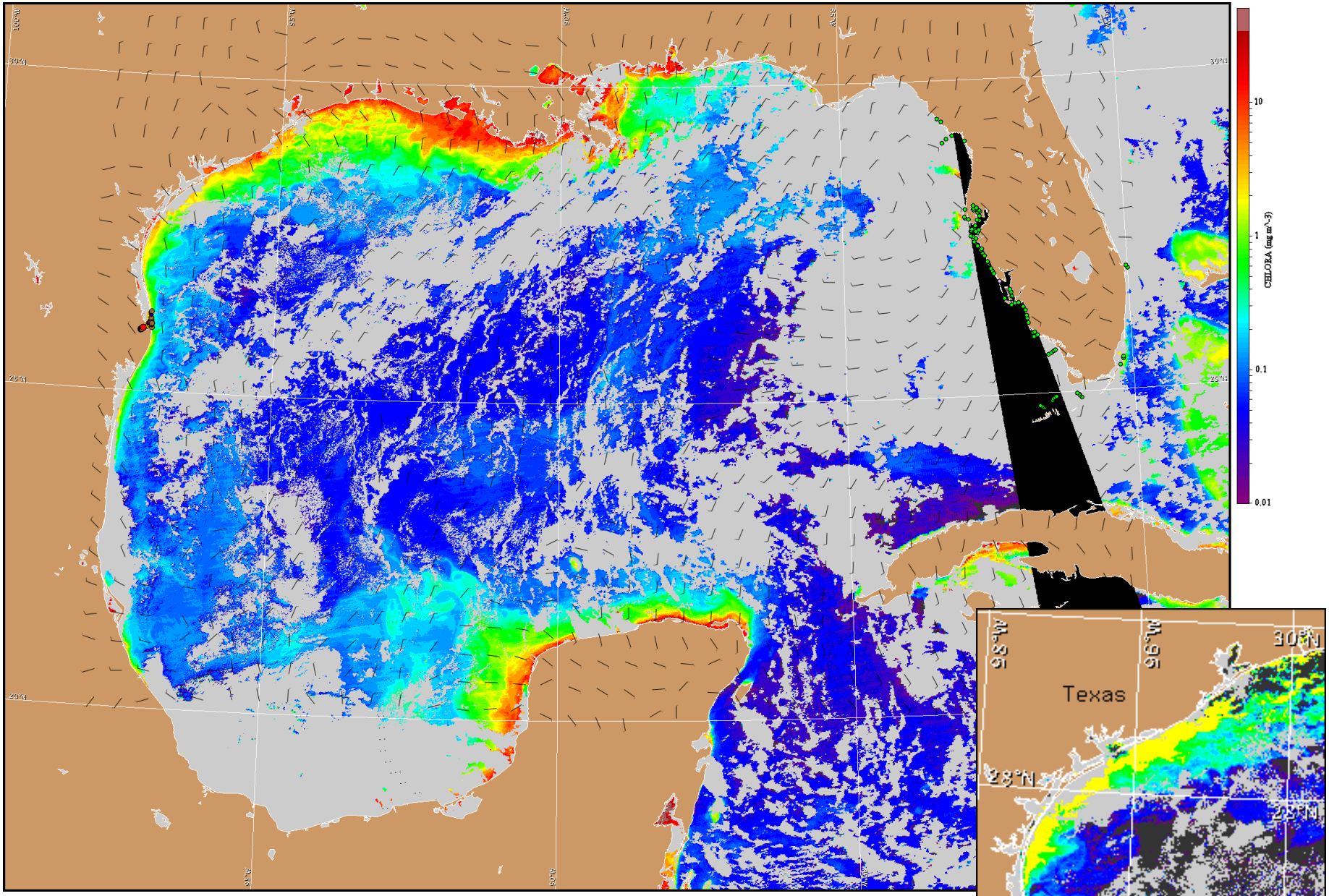
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

South Padre: Northeast winds (15 kn, 8 m/s) today becoming east winds (15 kn) this evening. North to northeast winds (10 kn, 5 m/s) Friday. Southeast to south winds (10-15 kn, 5-8 m/s) Saturday through Sunday.

Port Aransas: East winds (5-15 kn, 3-8 m/s) today and tonight. North winds (10-15 kn) Friday becoming east to southeast winds (5 kn, 3 m/s) Friday night. East winds (10-15 kn) Saturday becoming south winds (10-20 kn, 5-10 m/s) through Sunday.



Satellite chlorophyll image and forecast winds for September 23, 2011 12Z with cell concentration sampling data from September 12 to 22 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).